

In the Claims:

Please amend claims 1-3, 7, 9 -11. Please cancel claims 4 and 5. Please add new claims 39-54. The claims are as follows:

1. (Currently Amended) An apparatus, comprising:

a product carrier adapted to transport product undergoing manufacture; and
a first device adapted to sense an attribute of an environment within said product carrier
~~or an event affecting said product carrier; and~~
a second device adapted to encode data relating to said attribute and to actively and
wirelessly transmit said data.

2. (Currently Amended) The apparatus of claim 1, ~~further comprising: wherein~~ wherein ~~[[a]]~~ said second device adapted to receive said attribute or event data sensed by said first device and to transmit said attribute or event data includes a radio transmitter.

3. (Currently Amended 1) The apparatus of claim ~~[[2]]~~ 1, wherein said first device and said second device are ~~the same device~~ integral with each other.

4 - 5 (Canceled)

6. (Original) The apparatus of claim 1, wherein said product carrier is adapted to be sealed against the surrounding atmosphere of a manufacturing facility that said product is being manufactured in.

7. (Currently Amended) The apparatus of claim [[2]] 1, wherein said second device is programmable with ~~at least~~ a unique product carrier identity and is adapted to transmit said product carrier identity with said data relating to said attribute or event.
8. (Currently Amended) The apparatus of claim 1, further including additional devices, each additional device adapted to sense one or more additional attributes of the environment within said product carrier ~~or an event affecting said product carrier~~.
9. (Currently Amended) The apparatus of claim 8, ~~further comprising: whercin said~~ wherein said ~~[[a]]~~ [[a]] second device is adapted to receive encode data relating to said attributes ~~or events~~ sensed by said first device and by said additional devices and actively and wirelessly transmit said data related to said additional attributes ~~or events~~.
10. (Currently Amended) The apparatus of claim 1, wherein said attribute of said environment within said product carrier ~~or an event affecting the product carrier~~ is selected from the group of attributes ~~and events~~ consisting of temperature, pressure, humidity, particulate count[[,]] and the presence of oxygen, hydrogen, chlorine, elemental gases, ammonia, water vapor, hydrogen fluoride, hydrogen chloride, nitrogen oxides, silanes, alcohols, ketones, esters, amines, solvents, chlorinated solvents and fluoridated solvents a gas or vapor within said product carrier, the occurrence of vibration, acceleration and shock, the intrusion of visible light, ultra-violet light, infrared light and microwaves, and electromagnetic events and static electric charge buildup.

11. (Currently Amended) The apparatus of claim 1, wherein ~~[[a]]~~ said product within said product carrier is selected from the group of ~~products~~ consisting of a semiconductor substrate~~[[s~~ and]] , a wafer[[s]], a photolithography mask[[s]], a photolithography reticule[[s]], a semiconductor module[[s]], a semiconductor package[[s]], a circuit board[[s]], a magnetic disk[[s]], a magnetic hard drive disk[[s]], a magnetic floppy disk[[s]], a laser disk[[s]], a compact disk[[s]], a digital video disk[[s]], an optical disk[[s]], a lens[[os]] and a mirror[[s]].

39. (New) The apparatus of claim 10, wherein said gas or vapor is selected from the group consisting of oxygen, hydrogen, chlorine, other elemental gases, ammonia, water, hydrogen fluoride, hydrogen chloride, nitrogen oxides, silanes, alcohols, ketones, esters, amines, solvents, chlorinated solvents and fluoridated solvents.

40. (New) The apparatus of claim 2, wherein said first device and said second device are contained within said product carrier.

41. (New) The apparatus of claim 1, wherein said second device comprises a radio transceiver.

42. (New) The apparatus of claim 1, further including a wireless receiving station for receiving said data from said second device.

43. (New) The apparatus of claim 42, wherein said wireless receiving station is a radio receiver.

44. (New) The apparatus of claim 1, wherein said second device is adapted to transmit a date/time stamp with said data relating to said attribute.
45. (New) The apparatus of claim 1, wherein said second device is adapted to receive programming signals.
46. (New) The apparatus of claim 1, wherein said second device is adapted to receive control signals.
47. (New) The apparatus of claim 46, wherein said control signals are selected from the group consisting of on, off, reset, test and poll instructions.
48. (New) the apparatus of claim 1, further including a third device connected to said first and second devices, said third device including physical contacts to temporarily connect an external device to said first and second devices.
49. (New) The apparatus of claim 1, wherein one or both of said first and said second devices are self-powered.
50. (New) An apparatus, comprising:
- a product carrier adapted to transport product undergoing manufacture; and
 - a first device adapted to sense an event affecting said product within said product carrier;
- and

a second device adapted to encode data relating to said event and to actively and wirelessly transmit said data.

51. (New) The apparatus of claim 50, wherein said event occurring to said product while within said product carrier comprises an electromagnetic, electrostatic or magnetic event.

52. The apparatus of claim 51, wherein said electromagnetic, electrostatic or magnetic event includes the intrusion of visible light, ultra-violet light, infrared light, microwaves, into said product carrier and static electric charge build within said product carrier.

53. (New) The apparatus of claim 50, wherein said event occurring to said product while within said product carrier is selected from the group consisting of vibration, acceleration and shock up.

54. (New) The apparatus of claim 50, wherein said event excludes logistic and production control events.